

Brazil 1972

②

Claro

Perma Hide®

MEMO BOOK

NO. M46

100 SHEETS

20¢

NEW YORK LOOSE LEAF CORP.



Attractant

Brazil 1972 2241

Bambos (Pimenta)

Co. Municipio de Valença n° 2

Rua N.º 14, Valença, RJ

Valença to Guanabara

Alt. 10 m. in road

1600 h. in road 19 from

26 to end

color = soil (blackish) 7 from

20

soil sample 153

FRA = 1 kg (250 g) water (good) out

leaves, soil of black in the place

banks of stream, rubber (hard)

Open

Edge of "mangrove" low

tree root. also soil

blackish, sandy 2 from

damp soil to 20 or 10 m

high

leaves solid, green, the

Atractanthe

1 ml

April 26, 1972

2241

Bamboo (pinus)

Bo - Municipio de Valencia, 11
Km North of Valencia, Rd from
Valencia to Guatim

Alt - 10 m. s. m. m.

Photo 5 x 7 roll 19 from
26 to end

color = roll (Ektachrome) 7 from
20

soil sample # 53

FAA = 16g (250 cc) plastic (good) vial
leaves, some of blade with petioles,
buds & stage, culms (buds)
Some

Edge of "mate saix" low
tree forest, in sandy soil
climbing, forming ± dense
clumps, up to 8 or 10 m
high

Culms white, flexible, thin

1 cm or less in diameter,
but sheath deciduous, blade
falling soon, 4, bent down
ward, 3 or more branches
from a node. They branch
also very soon.
Leaves glabrous, long, ± narrow,
lanceolate.
Lamina smooth, covered by a
white wax or dust.

2nd

2242

Chil. C. Bromopur
60, M. Valencia, ± 18 Km North
of Valencia, Road to Guadalupe

In "campes" - open area
sandy soil, broad patches
of bromelias, and other
tropical plants.

FAA leaves & inf
Boq = inflorescence
no soil, no photo.

These "campes" don't look
like the "campes" of
Belén. The open area is
full of Cyperaceae but many
grasses also. The forest seems
look like "restingas" or
very low, poor forest.

(Desv.) Dandy 2 vols

(Desv.) Dandy 2 vols

Hypogynium virgatum 2293

Sp. Inf. with bracts

some place, open area,
of "camp" -

sturdy soil, white sand
very expensive

Near the cot, little

town of Guadalupe with
beautiful beach.

"Photo in Guaribi' beach -
" of Ribeirão do Anelão)

F.A.A inf a long -

Bong inf

62 vol.

4

4 nals

K, M, N, Y, P, L, E, B, F, G, W, I, S, C, W, I, S, S, I, S, P, C, O, L, P, R, E, 2244

CAMB, C, PE

Pirenia leptophylla

Bo. Municip. Valencia, Rd. Valencia

to Guadalupe, 12 km North^E of
Guadalupe S.W.

soil sample # 54

Oct. ~~25~~ ²⁵ 1951 S. W. - 1951

Very abundant all over
the forest. Delicate plants
in rather loose, open clumps
usually growing ~~under~~
below other plants.

Sturdy soil, very sandy. ^{the} Open forest, of small trees (and in some ^{of} alder & ^{some} grass). It was one of the first patches of forest immediately after the camps and settlements.

Many herbaceous plants
growing there, mostly
mosses, Hare-tail, Hare,
and ferns.

Plants in open, cut,
spots or along trail
very small, short and
almost yellow or very
light, poor green. Those
growing in dark places
beautiful, tall and
robust. All plants
with flowers from the
base. very few with a
small inf. at the
top of the main culm.
Inflores. small, green, light
but many also red.
Roots: very thin and
long!

Photo: Saw roll 20. from 1
to - 6 or 7

color: 8 ft. chrome roll

FAA = 2 ribs, 2) leaves, sp. h.,
in fl. - shoot apex - root?

b) seedlings - (very few)

Borg = many sp. h. & flowers

3:1 = " infl. in 7 stages

Living plant = collected

Soil sample = 54

no temperature (late, no
time)

Few seedlings seen (but
it was late and dark,
little time to do ~~the~~
everything).

Seedlings for collected look
like other seedlings of
P. vivipara - with first
fully developed blade

horizontal but long,
narrow lanceolate and
acute. It seems that
immediately the main
primary shoot branches
and give a little, tiny
shoot with a leaf
complement of many
leaves.

Next day, April 27 was
a horrible day, we
hired for hours,
and made several
stops and we didn't
find anything.
From Valencia, to the
West side there is a
road. The only thing
we saw and with
old inf. ~~the~~ was *O.*
ramonensis and
a small *O. latifolia*.

3 vials

April 28, 1972

2245

Raddia sp.

Ba, Municipio de Mbarira, 6 Km
North of Mbarira.

Rio Jequirica

Alt. S.M. mer. 260 - 270 -

Photo: ^{b&w} roll 20 from 7- to 23
color: Kodachrome roll #8 from
1 to 15 (there are photos of the
stream, forest around the stream
and lake from the road
vered of the river and edge
of the forest.)

b & W = trace of photos of my
"experiments" and stream.

soil sample # 55

3 vials. FAA, Boq, 3:1

FAA = leaves, shoot apex,

inf., ♀ & ♂, few roots

Boquel = inf ♀

3:1 = inf ♂ (~~at all~~)

2246 = *Streptococcus*

~~2247 = *Streptococcus*~~ 47 Drawing

Some of the fixed material
it might not be in good
condition. Plant collected
up in the slope were
so dry and "mutilated"
that I think are not in
good condition. Many others
are in good shape, the
first ones collected at
the edge of the river.)

Very abundant! all over
the front in a smooth
slope and near ~~edge~~
~~the edge~~ of river. The
area, especially the slope was
in a miserable condition
extremely dry, most of
the plant, even trees looking
dead. Roddie growing
near the river, was in good

shape. Plants delicate,
thin; leaves small, very
thin and slightly pubescent.
Almost all plants blooming,
see the dry ^{wild} (mutilated) ones.
Terminal inf. 8; large pale,
and in many part the
inf. from the 2° or 3°
node below. The terminal
Female inf. from almost
all nodes, sometimes
the last one in the
terminal ♂ system.
Small symph. ~~usually~~
1-3 procarlosis, usually
1 or 2.
Tip of the blade, like
in many other Roddies,
very thick, tuft-
y. Low trees, forest, not
very dense. No rain in

this place for 10 or 15 days -
soil temp = 75° (near the
river)

Air temp = high 78°F
low (overnight) 66°F

K, MO

2 vials
2246

Streptochaeta spicata

same locality

Not very abundant in the
slope.

FAA (leaves) infl. ± young

Boys

no photo, no soil

K, MO, NY, P

2247

Pharus sp. (leaves & parts)

same locality - in the slope.

some specimens with termi-
nal spathe in the main
axis of the infl. (Specimens
very dry and "mummified")

FAA few leaves, infl.

Boys

2 vials

Pilea rhipidophylla
April 29, 1972 2248
Bo, Mun. de Ubaia, 6 kms
North of Ubaia. Rio Jequirica.

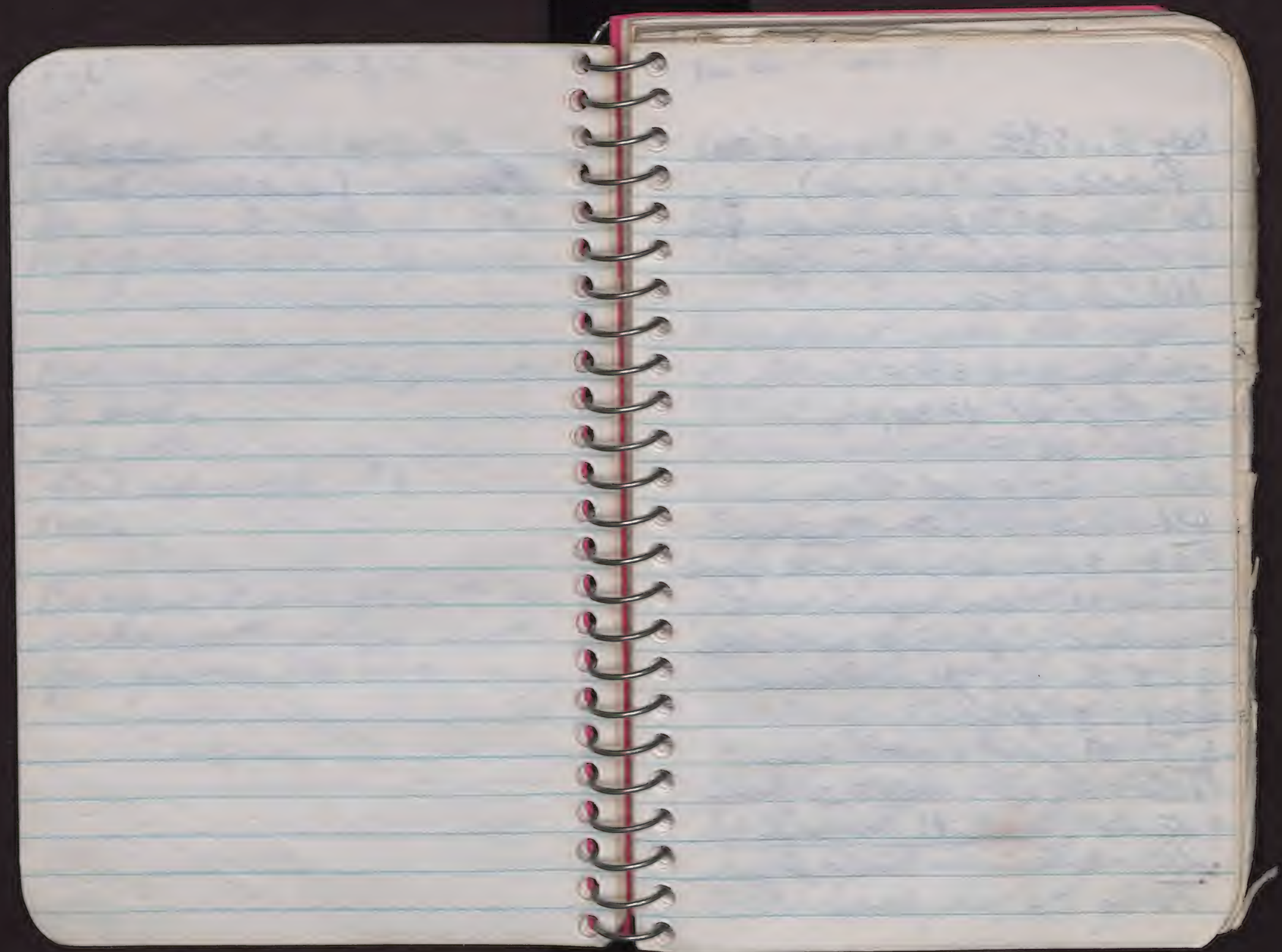
Photo: box roll 20 from 2324
to end -
no colds.
Soil sample 56
3 vials

Frequent in forest, on
a smooth slope not
far from the river.

2249 Felpa 1 vol

73 v
total 3 v

2249
Panicum grandifolium Doeb



May 6, 1972 2250

Proclitus sp. (gravel) 6
60, Municip. Jaguaquara, 4 km.
S. of Jaguaquara city - Fay.
Mundo Novo -

soil temp. = 69°F.

Air temp. at 12.30 p.m.

high 66°F

low 62°F at 8 a.m. ±

Alt sea level = 680 - 700 m.

F.A.A.: 4 rich: a) large wet in the dry
season; b) leaves & roots
c) seedlings, d) few infl. with both
♂ & ♀ in one panicle

Borg: 2 infl.

3.1: 1 infl. & root tips

Photo: 5 x w - roll # 21 from
1 to 16 - (excellent! photographs!)

color: Kodachrome roll # 8 from
16 to 26 (w. flash)

Bamboo 1st soil 58

soil sample # 57

Fazenda Mundo Novo, prop.
Donofoio Américo (Caramelo)

Abundant, near the edge
of forest. In dense "bamboo"
forest, growing under
O. macrantha, bamboo
and other vegetation.

Large and ^{erect} plants
up to 1 m or more - Plant
perennial, (culm, sheath &
nodes). Blade, large
lanceolate acute or so
because tip of blade more
or less irregular or blunt
(*Chadwick* type). All plants
with many inflorescences,
predominantly ♂ infl.
Flowers several from

each node (the mid and upper ones) and terminal to the culm. From 3 to 7 procladia grow in each node or axils, usually 4 or 5. Male symphore with the large number of procladia in fl. - In several plants in the terminal symphore or nodes below, the last 1 or 2 procladia of a symphore are female.

♂ symphore not only apical but from whole node below.

♀ flowers on the lower or mid and upper nodes rather long. Each ♀ symphore 1-3 or probably 4 at the most procladia.

Young, small plant also blooming and with more ♀ infl than ♂ seems to be that ♀ flowers appear first and as the plant grows older increase the production of ♂ inflorescence, ~~that~~ that the ♀ are also found in these plants but in less proportion than the male.

Several seedling and baby plants seen around rip clumps. Seedling are of the bamboo type but the first completely developed blade is not broad but narrow lanceolate and acute. ~~the blade~~

It reminded me of
the seedling of *Peruvia*
(seedling, more collected)
It is a beautiful and
strange type of forest
not seen in other regions
of Bolivia. It has tall trees
but scattered here and
there, mixed with
lower trees. The profile
is very irregular and
looks like a *Guatemala*
forest. It's dense and
difficult to walk
there in *Monte* *Monte*
in part, because of the
bamboo.

Roddie (the same) in *Monte*
"monte cipo" it's the first
forest which comes after the
catimbo -

Berabon

"Monte cipo" is not really a forest
but mixed of shrubs, low
trees and many "cipo". Hard
to walk in, full of spiny
plant, lots of big *Bromelia*
(terrestrial) and some "cactus".
Dry, desertic type of rep. like
the Argentine "Monte" or the
"Chaparral". Roddie was
growing there, and very
much abundant! all plants
blooming although plants
were so little smaller than
those collected in the other forest.
Monte cipo is the boundary tall
vegetation. ~~which comes~~
after the "catimbo" (desertic,
dry type of rep, no trees, or very
small, lots of shrubs)

2251

Bamboo (grace)
6-8 km from Japungu, C.
Fazenda (Novo Mundo)

adda - 6 km S of Japungu

Bamboo

2251

Merostachys

culm hollow in + all
branches, otherwise center
filled with soft pith
lens green with mottled
like *O. latifolia* - hairs
reticulate, slender -
Many branches from a
node.

long, heavy and may rot-reticulate
culm sheath. A very long
triangular, more or less 20°
or more in ~~young~~ new shoot
blade distinct narrow
lens sheath with short, reticulate
hairs, a little softer
large blades

Internodes not very long 3 normal
dense clumps
culm ± 1.5 cm diameter

climbing up to 15 m.
soil temp 67°F ^{air temp} low 58°F
temp 60°F at 4:40 p.m.
below - Hall 21 from 17 to

31
color Kodachrome #8 from 27

32 - flash.

34, 35 - passage into do & 12
timed at 12:00.

Merostachys *fischeriana* (Lam.)

May 7, 1972

2252

Bamboo (fruit)

8.5 km S of Jagna, Negros

Merostachys

Plum from Jagna

K, MO, NY, P, LE, B, EG, 2252

7' Bamboo - fruit

Alt. 700 m

B & W photo: roll 21 from 32
to end - a roll 22 from 1 to 16?

color - not yet run

soil temp 67

Air temp 62 at 11.30

soil sample: 59

alt = 10-12 m

culm color, thin wall
~~no more than~~ 1 cm in

diam or less, climbing
many branches from a
node

2 vials - leaves, one x photo
short spec.

2253 Schwannia

2254 Pharus peruviana

↓ soil sample 60

Schwannia = 2 nial. 154

Pharus 3 nial. -

Pharus roll # 22 for 16 to 29.

Macuambo - n.v. de Olyra
latifolia -

- 117

- 200

~~Lebanon~~ 2253
Panicum sp. - M. H. H. -

FAA -
Bocg -

K, MO, NY, P 2254
Pharus (with apical, terminal
apical.)

May 8, 1972

2255

Piresia rhipitophylla

Mun. Japauarana 16 Km East
of Japauarana City: Fazenda
Mundo Novo.

ca. $13^{\circ}32'30''S$ - $39^{\circ}55'W$

Alt. 700 m

Infrequent in forest with
bamboo dominant

no photo, no soil

Atractantha oreolamata

May 8, 1972

2256

Bamboo (fruits in pods, below thick

Co., Municipality Japaguana,

Riochito Oros, at 22 Km

SE of Japaguana city

Alt: ~~2000~~ 1500 m - 625 m

Photo: 6 x 9 roll = 22 from

30 to end x roll = 23 from 1 to

13:14

Color Kodachrome roll # 9 from

14 to 28 029

Soil temp = 70° F

Air temp = high ~~72~~ 72° F

Climbing 50-60 m ± dense

climbs up to 15 m ±

Thin culms ± 1 cm in

diameter - solid, flexible

Bulk sheath persistent

on late specimens

Leafy node 2257

160-100 m 18' 18' 18'

blade A with large curly
stol nodes and hairs, long
secumant on the edge

A ring, like a crown
of hair at the base of
(below?) the node.

One main branch
in each node and
several small, thin
ones.

In young thin branches
sometimes hard to

see if there is one
layer than others

leaf thin, lanceolate,
with short stol nodes

(white).

Many nodes per node
but the initiation of
branches is upright

not like in the next
bamboo - (intravaginal)

soil sample # 61

F.A. = 2 vials, 2) 250cc with bud,
2) small with blade, petiole, shoot
apex & roots

Pigme : collected

Beautiful bamboo with those
"rings" of large, silky, hairs of
light color & long, curly oral
velvet.

It is very abundant all over
the forest, and in some places
mixed with the next → (2257)
bamboo.

Root of beautiful forest, in forest.
(the back) cut a burn.

Merostachys

same day

2257

Bamboo (candiru)

Bar. Hum. Japnequara, Riacho
de Ouro, 22 Km SE of Japne-
quara City.

Alt: ~~1100~~ 625 m sea level

Large, tall bamboo ca. 20 m
tall ~~***~~ growing over
trees

culm ~~WSE~~ 4.55 cm
in diameter. Dark green;
in the upper part of the
internode with a white wax?
culm sheath large,
narrow, rounded at
the tip. Blade culm
only in very young new
culm seed. They are
smooth, no hair or spine,
abaxial surface shiny,

glossy -

culm hollow and
very strong -

Many branches per node;
in older culm seen that
branches are in two or
3 rows almost all
around the node -

Each branch with a very
small leaf complement in
young culm, few leaf,
broad, "Olive type" - In
older, larger culms

blades longer and narrower
not so wide -

Blades rather thin, smooth
pubescent?

Clump not very large
Rivers Arizona collected -

Long internodes ca. 26-32
inches long - 65-80cm

Soil sample #

FAA = 3 val

b) Lays 500m in the soil &
about open

c) leaves (older culm)

d) " (young, loaded)

Soil sample # 62

Photo: brown soil # 23 from 15'
to end?

color: Kodachrome (no photo) soil 9
from 28 to end -

branches rather thick with
the base covered by several
bracts (or sheath) with robust
Arundinaceae with the other
bamboo (2256)

Chusquea (Retbergia)

May 9

2258

Bamboo (but below sheath!)

Dr. Municipio Japaguana,
36 km SE of Japaguana city

Alt: 360 m. s.m. area

Soil temp 72°

Air temp at 12:30 = 70°

(little rain)

soil sample # 63

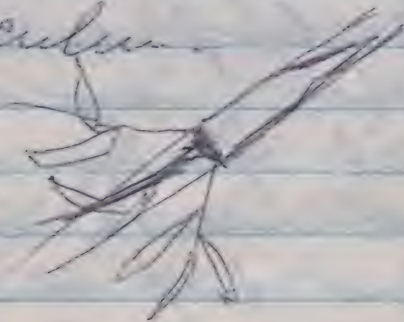
Abundant, along roadside,
near stream or a creek.
Common bamboo, looks
like one Olyza, small
clumps, herbaceous? or
up to 5 m. but usually
erect short about 1 m.
1.50 m.

Culms solid but rather
soft (herbaceous?)

buds below sheath (but
they break through a
slot of bract or the base of
the sheath that seems to
cover it below the node.

Here there ~~is~~ one
central, main bud and
1 or 2 on each side.

They develop in 3-5 bristles
sometimes one larger
than the others. Bristles
with leaf-complement
grow upside down, i.e.
in opposite direction that
the sheath (with sheath) of
the culm.



Culm beneath permutat
very ^{rough} + (reticulate - anserine)
with long, ~~very~~ acute
blade? It looks like it is
very little differentiation
between them.

New culms erect up to
2 - ~~3~~ ⁴ if more
weak and leaning
against other plants.
Culm no more the
1 cm in diameter or
a little more.

Very large leaf complex
and very large broad
lanceolate leaf blade -

blades thin, very delicate
(unusual for a bamboo)
They look exactly like
the *Olyza* but much
more than than a lot.

folia.

In other part of that forest
we saw one much taller
probably 8 m tall -
Forest - one of the most
beautiful I've seen in
Bosnia. The road
cut through the forest.
One can collect almost
from the car. On
the right left hand
side of the road (coming
from Japuzak) it's
the creek where
we collected the bamboo.
On the other side of
the road the forest
goes up (a slope of
a hill) to the top -
there I couldn't see that
part of the forest.

Pineiro was near and
start to rain ~~thickly~~ &
lightly. The road, from
Japaguana is not
any good but quite
adequate in good
weather. But from
that area coming
down to Apurimac
and Ica the road
is horrible, impossible
to go with rain.
All that road from
that place and even
before, up to Apur-
imac, ~~there~~ is Scanti-
ful. There are many
places with forest
along the road or very
near. Ica has forest
but it doesn't look

so beautiful ~~thick~~ like
that area. (Pineiro
didn't know of that
spot.)

FAA - 2 miles: bus (Cuzco)
& leave a picnic with some
of Glade.

Photo 5 x 7 only - roll
#24 from 1 to 121

Apurimac: collected.

(From Japaguana to
this place it's about 1 hour
or a little less. (with a pickup up
Wills) From there to Ica
it ~~was~~ ^{is} about 2 hours
and a half.

May 10

2259

Bd., Municipio

7 km North of Huatla

Olyra ecaudata Swell.

^{rel. aff.} Olyra (Pursh) ^{gigantea} ~~ecaudata~~?

(Same spot where I collected before).

Large plants in dense clumps up to 3 m tall. Very few plants with flowers. Inflorescence born in a separate shoot from the base of the plant. Vaselets in ripe, small (probably the first ones, ~~very~~ about 50 cm or so but most of them very large (120 cm) with flowers at the apex of the culm and

also from second
node below (1 or 2
partial inf x wide)
leafy parts of these
culms with very reduced
or small blade.

Large paniculatum, open
spike rather large (\pm like

O. latifolia).

No fls, no soil

FAA

long.

cf. *Merostachys termites* Nees

May 10 KMO, NY, P, LE 2260

Campos (huge blocks
of, Municipio Thibataia, 12 km
N.E. of Thibataia, (going to
Br 101.)

Alt = 225 m

Soil Temp. 72

Air Temp 68°F at 4.30 pm

Soil sample # 64

Photo: per b+w roll # 24 for
22 to 26.

FAA = 200 cc with the leaves,
500 cc with buds.

Herbarium: collected

Large bamboo in the stand,
below culms, overhanging
over vegetation, about 8 m?
or more. By May 3
branches from a node
sometimes 2, and the

middle one very like
them, small, even by heart.
Large, large leaf complex
root. The bark ~~thick~~
the leaves ~~are~~
up to 1.80 m.

Blade broad lanceolate
strongly asymmetric at
the tip. (ca. 40 cm - 60
cm long, strong, glabrous).

Bulbous very hard, \pm
1.5 - 2 cm diameter
with a ring of
nodes. Bulb surface
asperous - bulb sheath
also slightly asperous.
Some times 4 branches
from a node.

Abundant in beautiful
forest, on a steep

(no time for many observations,
rain and ~~people~~
P. didn't wait to work -
the morning alone) but
we collected the bamboo!
finishing about at
sunset.

Paradiolysia sp.

K, MO, NY, P, LE, B

May 11, 1972

2261

Bo. Municipio de Itapúa to
Colonias, 18 km NW of
Itapúa de Colonias on road
from Sta Cruz de Victoria
to Itapúa.

~~*Olyra* ? sp. (glaucous?)~~

Paradiolysia sp.

Abundant, in some places,
dominant plant in forest.
Forest is open, but at
present in very bad
shape, extremely dry
after many days without
rain. There was a
small stream here,
now dry.

Pretty *Olyra* in $\pm 70-1$
height. Inf. a paniculate
terminal to the culm on
and from 1-2 nodes

below; in some plants, 2
partial inflores. per node.

All infl. panicle flowering
and only one plant within
a group infl. (in herb.)
and a youngest one (in FFA)
but "monsters",

♀ sp. small.

Roots: very strong and
thick, *Paradiolysia* type

FAA: 1 nod with leaves
& 1 inflores.

Soil sample # 65

no pots, no temp.

Alt: ± 170 m.

This forest is probably
one of the few left
still uncut in a
large area, where
forest was cut over
and at present there

In pasture. Very dry
no rain, brownish?

In some places, this
Olyra in association
with the Roddie (Brazilian?)
and Roddie polyphloica.

2262

same place

Stephanium guianense

~~Stephanium~~ polyphloica, 2

found in many places
of forest. Plants are
not very pretty due to
a dry period but still
with many ♂ flowering.
Very few ♀ seen, all
of them paired.
In some places with
Olyra sp. and R.
breviloba?

F.A.A. = leaves a row
♂ leaf. Some short eyes
no photo, no soil

2263

same place

Roddie (Basilich?)

Common in dry forest
Of all three species
collected this one seems
to be the less spotted
both by the lack of
white. Few plants
with the paired in flower
but I saw many new
shoot coming from the
base of old clumps.
(The same for R-
polypodon?)
In both, thin, glabrous
blades. Looks like
the Roddie of *lorax* do
I collected with Tomas.
Also I think I collected

in the 2° Safari (South
near Itapebi) (beautiful
stream) ~~was~~ with the
2 other Roddie.

FSA - leaves
no photo, no soil
(this was sick and
we were in a hurry
long driving from
Ipitani to Ruma.)

Bamboo from Nure
15°15' S - 39°06' W

2261 Olyra sp. - soil 65. 64 70
2262 Redd. polyg. - May 11
2263 Redd. brom.

Atractantha cardinalis

May 12. Nure 2264

Bamboo finite.

Barrel with 24 from 27 - and

~~other with soil 10 from 1 -~~

last one lost (open canons)

and roll 25 from 1 - to 5

high temp 76°F

low 70°F

soil temp - 75°

Culm, mpt apertures, solid

CO = 1 1/4" diam or less

thin sheath ± persistent

Glade deciduous & high.

Smooth & slightly lustrous

Many thin bundles small

but one main one

10-15

2265 *Merostachys*
bamboo ② life units on active
coll 25 from 6-22

2266
bamboo ③ life units on active
coll 25 from 23 to 30

② *Merostachys* 2265
leaf below catenation
"like" - many branches &
nodes. - equals size in
length below with thick
nodes, ramp-like, ca. 15 cm
with culm sheath persistent
with thin & glabrous, scitose
leaf complement - large with
large lanceolate, broad
leaf.
Nodes long 70 cm

Merostachys asymmetric
Atractapha
grasses collected -

5° bamboo 2266

internodes ± 40 cm
branches & nodes in
main culm but in the
young branches at the
top main axis 2 or 3.
Culms solid very strong
and hard smooth
culm sheath persistent
with node for narrow
triangular ^{bent downward} with oral setae
- culm sheath very
smooth.
Culm ± 1.25 in ~~to~~ cm
in diam. flexible etc.
repet. up to 12-15 cm.
leaf complement with only
large.
Leaf long, narrow with
strongly asymmetric placed
midrib, not pubescent

Loc. 35-8:

7 km N

Rd. Maa - Olivenza, 7 km North
of ~~the~~ Mata Mirones -

very abundant, col 3 -

soil sample # 66 for all

3 samples

Alt: 50 m

2268

Paniamelle

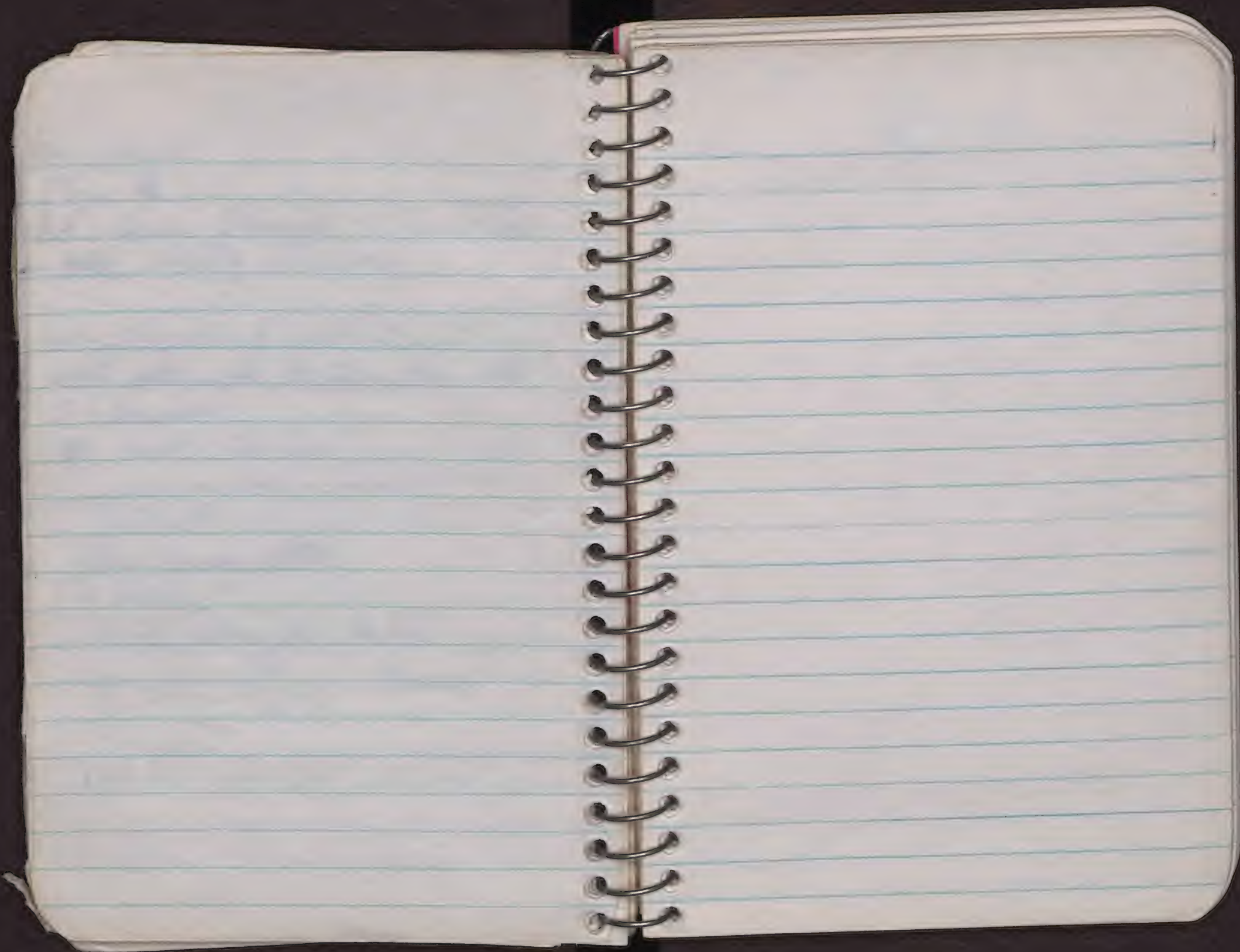
4 vials

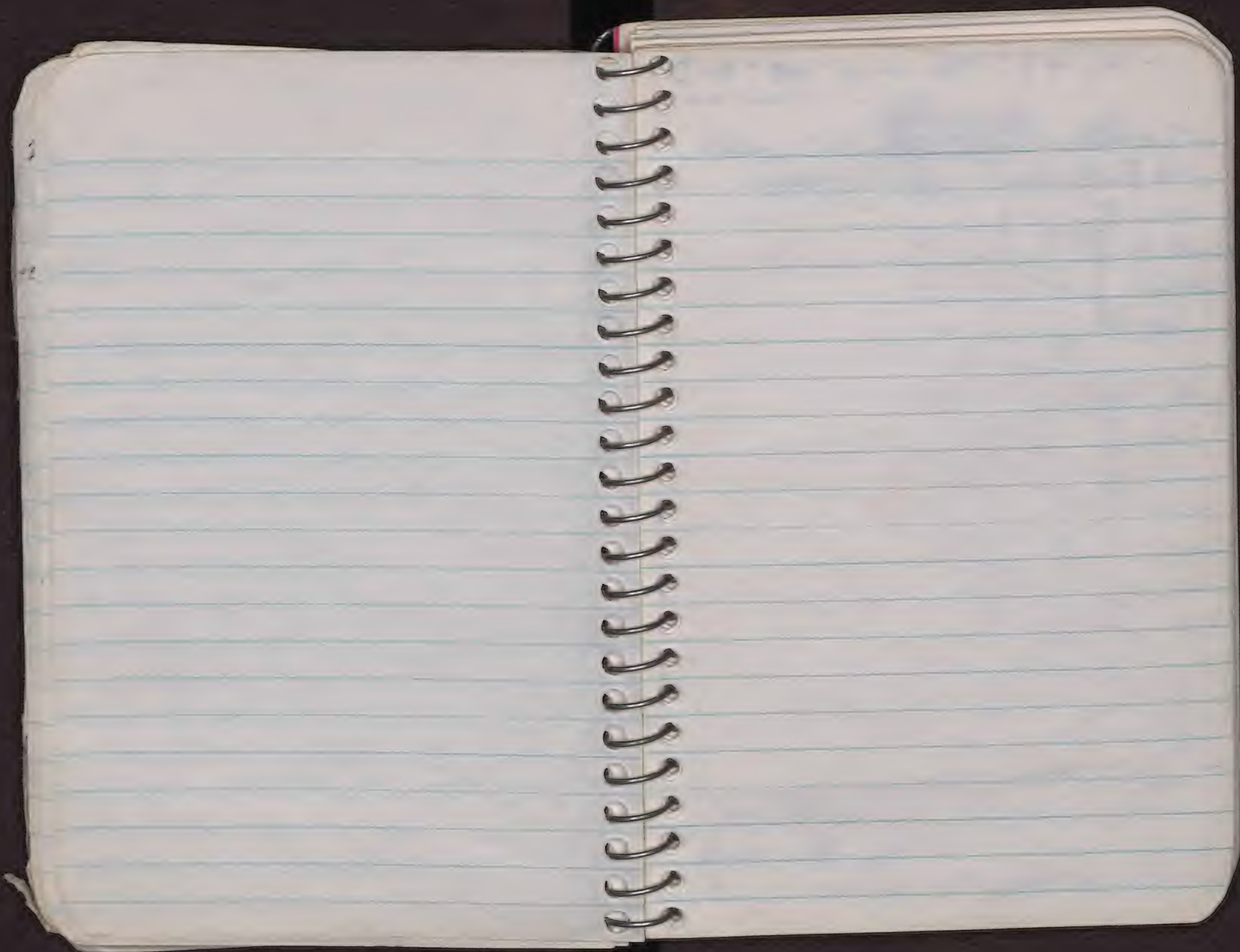
soil sample # 68

5.5 km S from Maa

4 vials

15° 19' S -- 39° 05' W -





Olyrae sp.

+15°20'S -- 39°06'W -

no seed in net.

May 13 ~~Alvinia~~ Nyorea 2267
~~Alvinia~~ ? *Olyra* below 3 ft

1. *Myra*
2. *side*
3. *type*
4. 31
5. 1
6. *side*
7. *type*
8. *side*
9. *type*
10. *side*
11. *type*
12. *side*
13. *type*
14. *side*
15. *type*
16. *side*
17. *type*
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92. *side*
93. *type*
94. *side*
95. *type*
96. *side*
97. *type*
98. *side*
99. *type*
100. *side*

side
side
20g : ♀ spl.
311 : many ♂ spl. and

Olyrae. sp.

+15°20'S -- 39°06'W -

no real in map.

May 13 ~~Alvinia~~ Nihoa 2267
~~(Alvinia)~~ Olyrae Nihoa 3 ft

Bo, Municipio de Mena, Red. Mena
Santa Lucia, 10 km S.W. of Mena, Rio de
Pimentas o Pimenteira, Fay S. Jorge

Alt: 25 m s. m. m. a. . . .

Photo. 6 m roll #25 from 31
to end and roll n. from 1
to -

collected: Kodachrome roll # from
1 to -

Soil sample # 67

Bottom Temp. 2 ft at 12.30 p.m.
80°F.

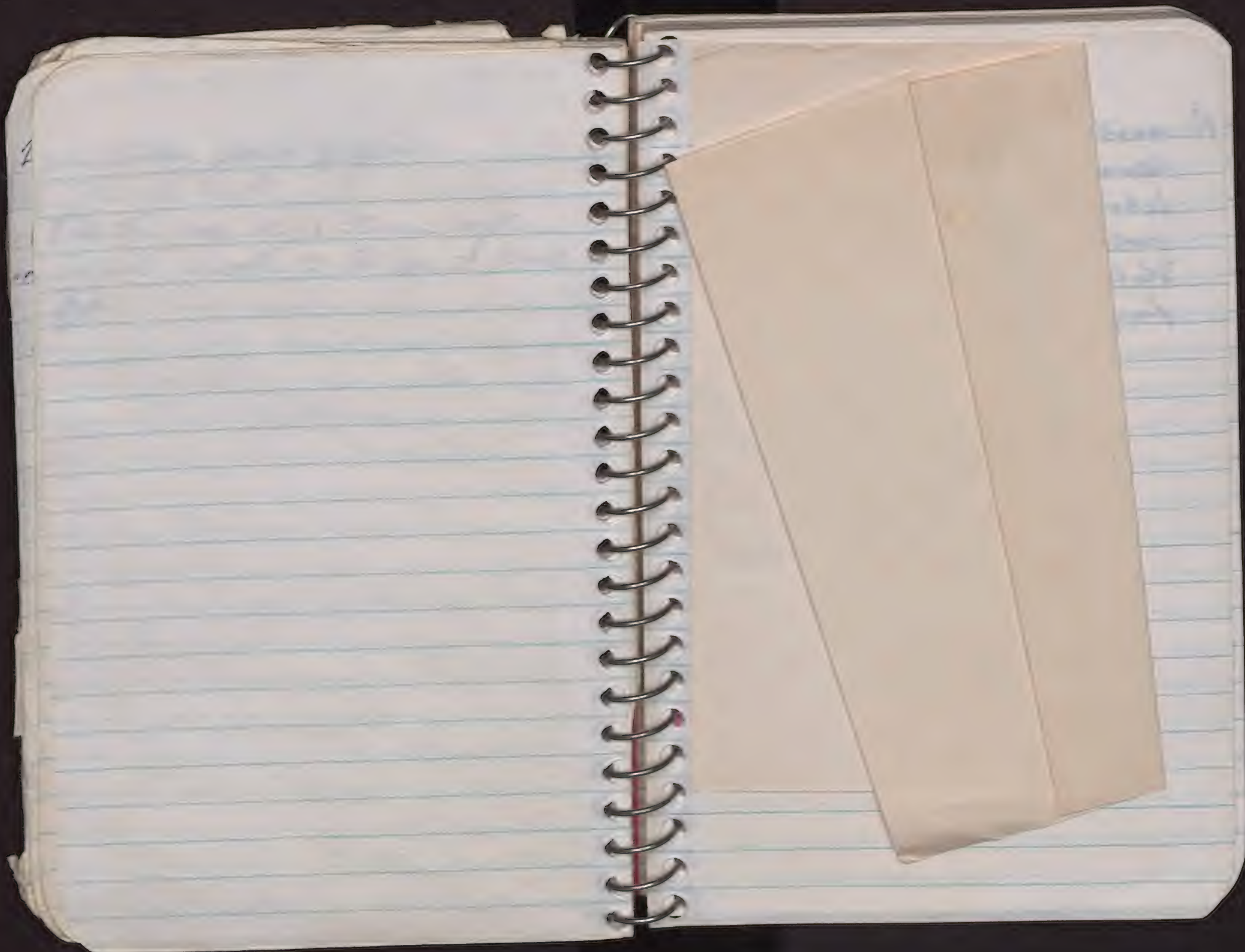
Soil Temp. = ? Temp. surface
FAA = 3 m. 3) leaves, spt. but spt.
of seedlings - c) very poor with many
predators

60% : ♀ spt.

3:1 : many ♂ spt. and

2 same size young of aphid

Plants up to ⁷⁰ 1.50 m high.
Some small to 50 but none
~~for~~



Ms Calderón--

Mix-up on numbers 2121: which is correct?

There are some loose specimens of yours from Brazil at end of your cabinets: we should look at them and decide what they represent.

Redia brasiliensis

Rio de Janeiro.

South Mato Grosso

Bahia? Pernambuco?

R. portoi

Bahia -

R. everts

lanata

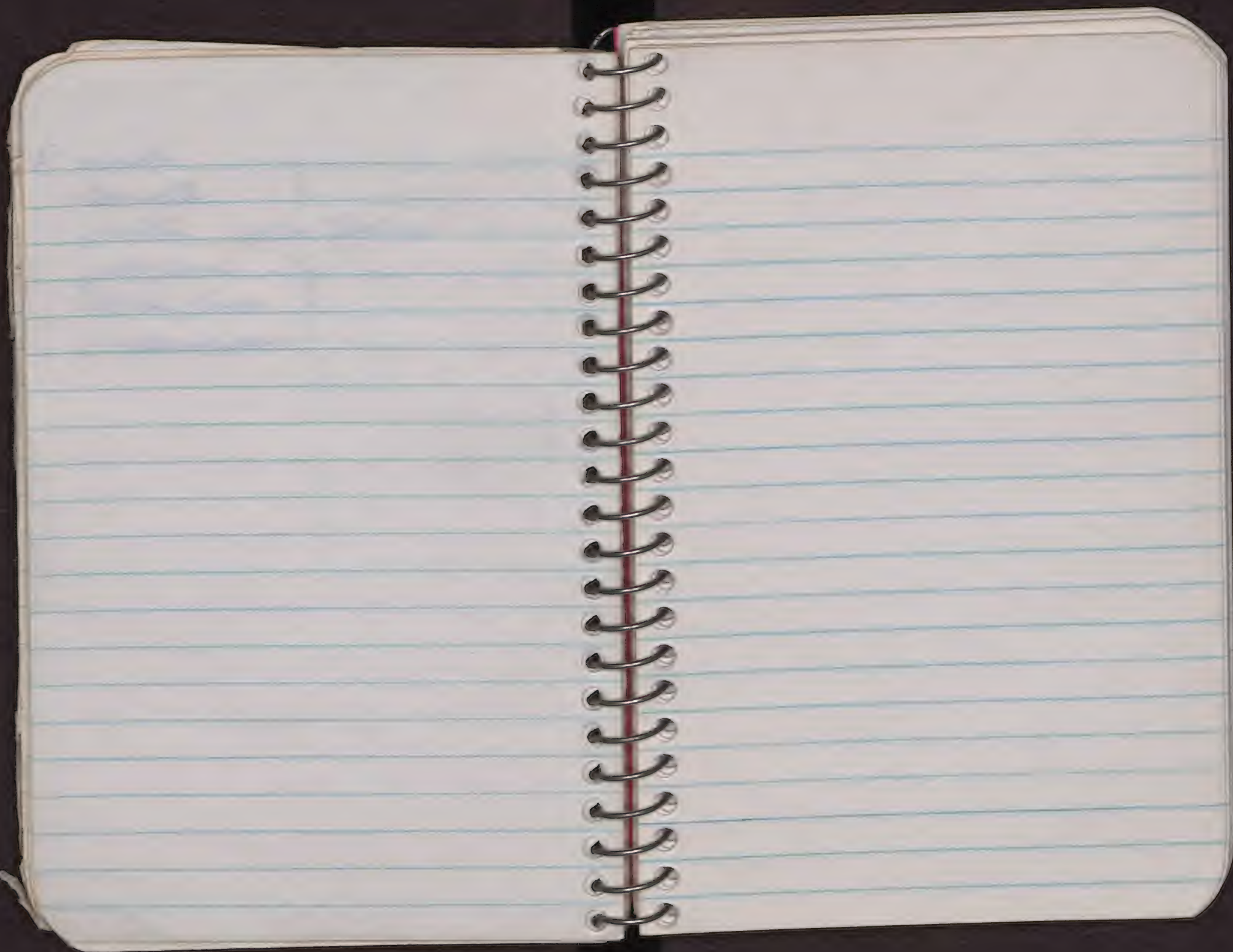
levis

prolifera

stolonifera

purpurascens

Bobie





2158

Limnoria, Bay of Panama,
± 3 km from Canal

toward the Panama city

Bay area -

Loxostomum *spontaneum* L.
Physiculus *spontaneus* L.

F4A - leaves

2157

Some place out there

latipolia l.
Ulysses (the same)

Small plants growing in the
the bamboo

F.A.A. leaves

1/31. 3, 1971

2156

Laurencia, Par. of Pinar
3 km from Coahuila, Tamaul.
the Reserva del Bayamo.

~~Boerhaave~~ (20)

~~Boerhaave~~
F.A.A. leaves

~~Boerhaave~~

2155

Nov. 3, 1971

Rancho, just of Rancho,
3 Km from Santa Teresa
the Reserva del Bayano.
~~Stygo = Boreto? Chiriquito~~

F.A.A. News

Plot - vol # 4

Nov. 3, 1971

2153

Paradise, Province of Navarra

3 km from Navarra

toward the Pyrenees are

Bayano -

Stylocichneus notostriatus

FAA = heavy, in house -

3:1 = in house -

berg = in house -

same place

Plains of France

FAA? no?

N₂WIS

2154

2150

Nov. 3, 1972

Reservoir, just of Reservoir
3 km from 6 miles
towards the Reservoir at

Barano -
~~Barano~~ ~~Rhizophora~~ ?

F.A.A. = leaves

2151

Same place & date -

Clusia latipetala
F.A.A. - leaves

2152

Plains of - (stud.)
F.A.A. = leaves

WIS

2149

~~Parus, Parus, Parus~~

~~Parus, Parus, Parus~~

~~Parus, Parus, Parus~~

~~Parus, Parus, Parus~~

~~FAA. Parus, Parus~~

~~no rto - Parus~~

Nov. 1, 1976 2149 st

Parus, Parus, Parus

Parus, Parus, Parus

Morton Wheeler Trail 9

9° 09' 60" lat. North

79° 51' long West

Alt: 4000 ± m. s. m.

Parus (small)

2147

Banno Katsuroo Takami

A. Ransom Trail 5-8

90° 09' 50" Lat. North

79° 51' Long West

Alt. ± 500 m. s. m.

Phonics

~~1111 - 1005~~

2148

1582

Phenol, Butylphenol, Para-

via Kanal, Barno kotlova

Island, Massachusetts

Morton Wheeler Trail 9

90° 09' 60" Lat. North

79° 51' Long. West

alt. 400 m.

Thelypoda americana

Dining Plant: collected.

$F(AA') = \text{Kern } A'$ ist

near part de

2182

2184

2231

2250

FAA = Leers, ~~leaf~~
bag? = no

Thelotrepha asplenaria

Alt. 550 m. 1 m.

79° 51' long. West.

9° 09' 50" lat. North

A. Krumm Trail 5-8

Banco Colorado Island,

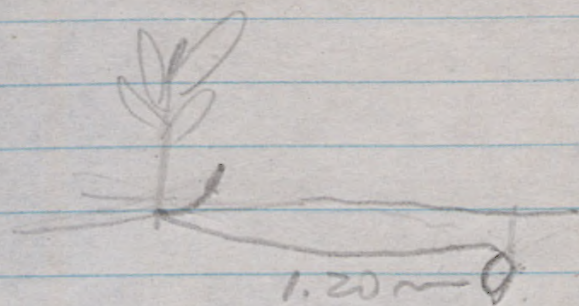
Panama, Panama Canal,

2146

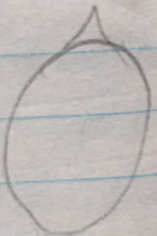
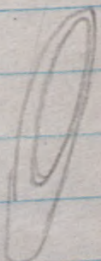
Nov 1, 1971

Panama, 1971

Green Point St



50
18
12
21
22



62
11
73

2. Katz
Pavani 1971
T. Leo